On the other hand, active material particles of the present invention include both granulated particles obtained by adding a granulating agent to a mixture of a low electron-conductive material and a high electron-conductive material and granulating the mixture, and mixtures of low and high electron-conductive material disposed in the granulated particle gaps. The claimed mixtures disposed in the granulated particle gaps (see Fig. 22) is not disclosed or suggested by the new Sato '514 reference or any other reference of record.

The claimed combination of particles allows electron conductivity of the fixed layer filled with the active material particles to be improved and electric discharge to be performed at a high output.

(2) Fixed Layer

The above –described active material particles of the present invention is filled in the electrolytic solution to form a fixed layer in a static state wherein the fixed layer is closely packed so as to form a close assembly by having the claimed mixture disposed between the granulated particles gaps to increase the density of the active material particles adapted to discharge or absorb the electrons. Therefore, as disclosed in applicant's specification at the bottom of page 11 to top of page 12, unexpected effects can be achieved by the present invention.

(3) Problems To Be Solved by the Invention

The following passage can be found out at paragraph [0002] of Sato;
A typical electrode structure of the prior art is manufactured by coating a current-collecting member surface with a compound mixture containing an electrode material, a powdered electrically-conducting substance, binder and solvent, vaporizing the solvent by directing hot air flow, and drying the coating to attach an electrode film to the surface of the current-collecting member. Unfortunately, the electrode film is prone to peel away from the current-collecting member and as a consequence the electrical resistance of the electrode film does not decrease.

Paragraph [0003] of Sato discloses that "An object of this invention is to provide an electrode film that adheres well to the current-collecting member.

Paragraph [0004] of Sato discloses that "Another object of this invention is to provide an electrode film with low electrical resistance."

Paragraph [0005] of Sato discloses that "Another object of this invention is to provide a battery or double-layer capacitor with an electrode film having low electrical resistance and good bonding."

Paragraph [0006] of Sato discloses that "This invention relates to a method of manufacturing an electrode structure by coating a compound mixture comprising an electrode material, binder, and solvent onto a current-collecting member, directing warm breeze onto the compound mixture coating to vaporize the solvent and form an electrode film on the current-collecting member."

On the other hand, an object of the present invention is to provide a battery of a fixed-layer type constructed such that active material particles are filled in a vessel, for simplifying equipment, enabling an enlargement of scale, recovering and replacing degraded active material particles and catalysts, installing heat transfer surfaces within the battery, and increasing an energy density. Another object of the present invention is to provide a layered battery having a three-dimensional structure comprises of particles in the shape of fixed layers, thereby increasing a battery capacity by increasing a volume of the battery, and providing various advantages associated with scale up.

As described above, Sato does not disclose static granulated particles having mixed particles disposed therebetween to form a fixed layer corresponding to the claimed invention. Furthermore, there is a great difference in problems to be solved by the invention between Sato and the present invention.

Thus, it would have been not obvious to one of ordinary skill in the art at the time the invention was made to add a binder to Tsutsumi, Dansui, and Ikoma's battery for the benefit of binding the active material particles together, or to provide mixtures of low and high electron-conductive material disposed in the granulated particle gaps. Accordingly, it is submitted that the rejections should be withdrawn.

It is submitted that all claims are now of proper form and scope for allowance. Early and favorable consideration is respectfully requested.

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Respectfully submitted,

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